

Timpanogos Cave National Monument

During 2001 we conducted 16 surveys over three visits to TICA, all of which were general VES. We documented one lizard and three snake species (table 7) from a total of 36 observations. One voucher specimen was collected from TICA during this inventory, a road-killed rubber boa (*Charina bottae*).

Survey priorities in 2002 were to locate amphibians and lizard species not already documented. We made two field visits, and conducted 17 surveys, including 4 nighttime wetland surveys. Only two species were observed in 2002: the sagebrush lizard (*Sceloporus graciosus*) and the western rattlesnake (*Crotalus viridis*), and only one individual of each.

Figure 13 shows the level of effort expended in person-hours (time multiplied by the number of surveyors) in survey according to habitat type in 2002. Most of survey effort was spent in spruce-fir forest, the dominant habitat type at TICA, and in riparian areas. Figure 14 (a-b) shows survey locations by survey type in TICA for both 2001 and 2002, including locations outside of the monument boundaries that we surveyed for breeding amphibians.

Our estimated inventory completeness for TICA is 100%, based on the habitat suitability for herpetofauna. However, there are some voucher specimens for the monument that are not contained on our species list. The monument has a tiger salamander (*Ambystoma tigrinum*) specimen collected from around the ranger's residence in August 1975. The NPSpecies database lists a garter snake (*Thamnophis elegans*), also collected from the residence (date and collector unknown). This specimen was not examined for verification of identification. Although it is likely that salamanders and garter snakes occur in the area, the riparian habitat within the monument is not suitable for these species. It is highly improbable that they are resident to the monument, due to lack of prey items and unsuitability of habitat. Both specimens were probably migrating individuals. The NPSpecies database also contains a record for a night snake (*Hypsiglena torquata*) also collected at the residence (date and collector unknown); although this specimen was not examined it is likely to be a juvenile gopher snake (*Pituophis catenifer*), which look similar to night snakes. Additionally, there is an account of a collared lizard having been observed in the monument (M. Gosse, pers. comm.). The habitat is unsuitable for this species, being shaded for much of the time and with only a short summer season; this species is extremely thermophilic. TICA is close to the urban Salt Lake City area, and is a popular weekend destination. The most likely explanation for the presence of a collared lizard at TICA was that it was brought there from another location and released, a fairly common occurrence among a variety of species in parklands.

Table 7. Amphibian and reptile species observed at TICA in 2001 and 2002. An asterisk (*) denotes that a photo voucher has been collected for this species. Species in boldface had not been previously documented by the present inventory, species followed by a (‡) were observed only in 2001.

TIMPANOGOS CAVE NATIONAL MONUMENT	
AMPHIBIANS None observed in 2001 or 2002	
LIZARDS	
*Sagebrush Lizard	<i>Sceloporus graciosus</i>
SNAKES	
*Gopher Snake‡	<i>Pituophis catenifer</i>
*Great Basin Rattlesnake	<i>Crotalus viridis lutosus</i>
*Rubber Boa‡	<i>Charina bottae</i>

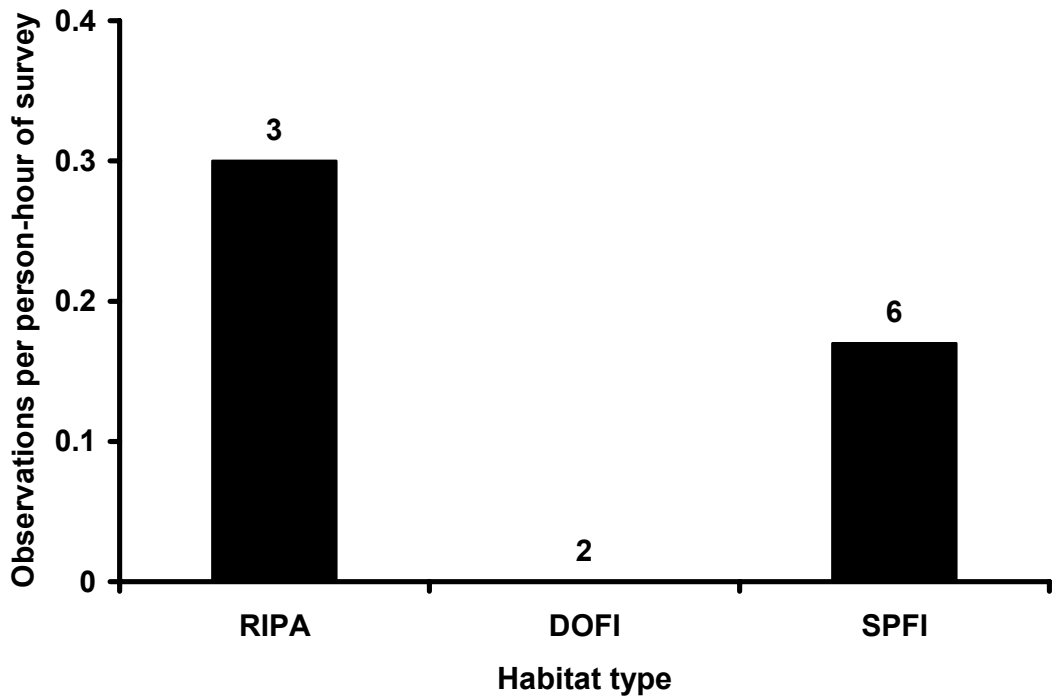


Figure 13. Survey effectiveness among habitat types sampled in TICA during 2002. **RIPA** = Riparian and canyon woodlands; **DOFI** = Douglas fir forest; **SPFI** = Spruce-fir forest. Numbers appearing over bars denote number of person-hours of survey expended in each habitat type.



Figure 14a. Herpetofauna inventory effort in Timpanogos Cave National Monument and surrounding localities in 2001 and 2002.

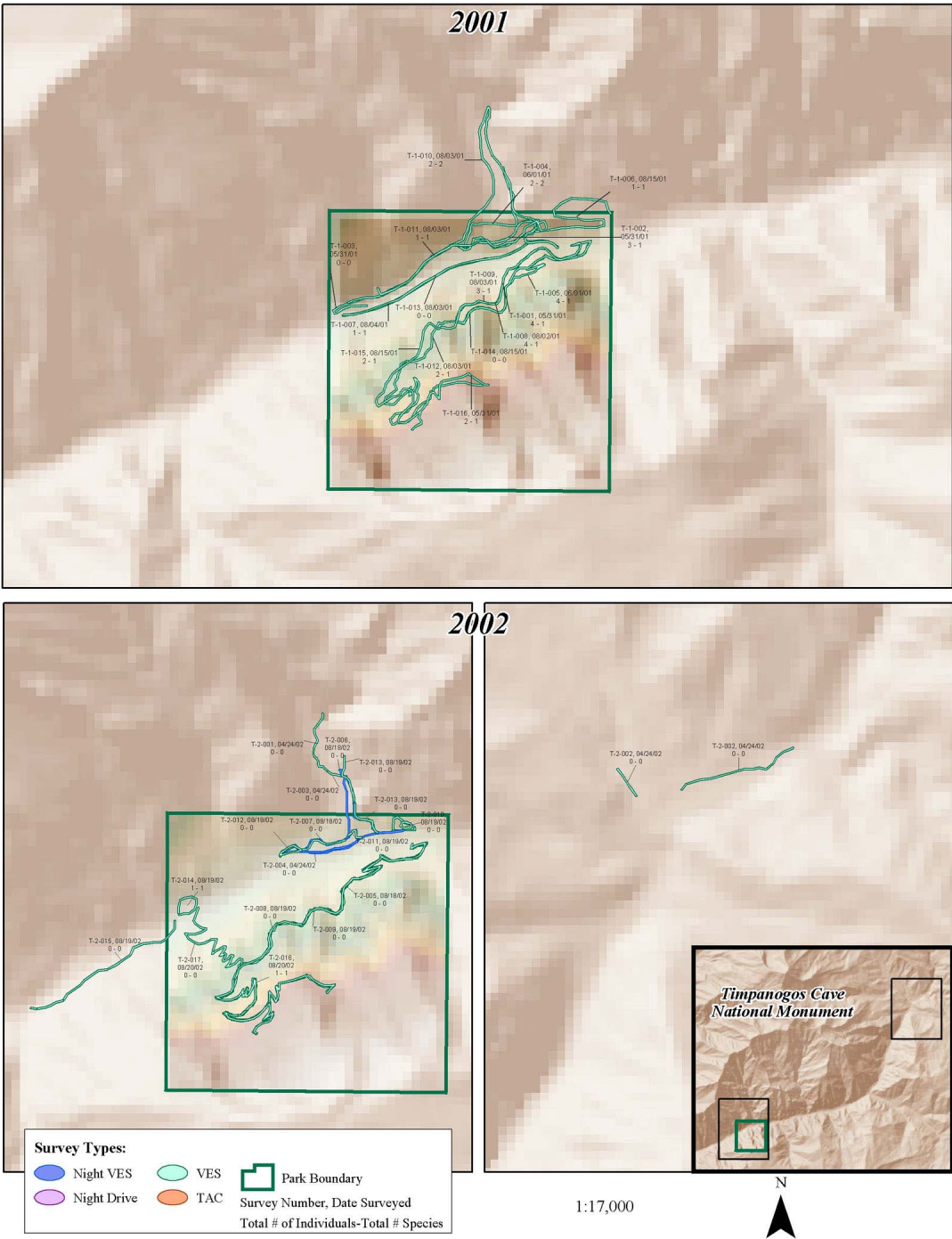


Figure 14b. Herpetofauna inventory effort in Timpanogos Cave National Monument. Line color depicts survey type, width of line shows survey coverage. Lines are labeled with survey number, date, and number of individual observations to number of species observed.